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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,530	07/22/2003	Hideyuki Motoyama	030846	4899
23850	7590	01/25/2006	EXAMINER	
ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP 1725 K STREET, NW SUITE 1000 WASHINGTON, DC 20006			KALAFUT, STEPHEN J	
			ART UNIT	PAPER NUMBER
			1745	

DATE MAILED: 01/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/623,530

Applicant(s)

MOTOYAMA ET AL.

Examiner

Stephen J. Kalafut

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>22 July 2003</u> .  | 6) <input type="checkbox"/> Other: ____.                                    |

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 7, 9-14, 17 and 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa *et al.* (US 6,519,147) in view of Guagianio *et al.* (US 6,352,455).

Nakagawa *et al.* disclose a computer, which is a type of electronic apparatus, and which includes a coolant loop comprising a heat-absorbing member (column 4, lines 36-40) within one housing (1), a heat dissipating member (column 5, lines 7-21) in another housing (2). Among the components cooled by the coolant loop are a hard disk drive (6), a battery (7), a CD-ROM (8), a CPU (4), a keyboard (column 3, lines 62-66) and a palm rest (figure 4). The coolant loop also includes a tank (15), which can be replenished (figure 11), and thus has an inlet and an outlet. These claims differ from Nakagawa *et al.* by reciting an elastomer bag which receives vibration or pressure from another component, and which has two ports each connected to a check valve. Guagianio *et al.* disclose a pump that includes a bladder (20) made of elastomer (column 4, lines 1-7), thus constituting an elastomer bag, and which is connected at either end to check valves (25, 26), thus forming inlet and outlet ports. Because this pump may be operated by electricity (column 4, lines 23-26) or by pressure (column 4, lines 52-54), and because its operation is independent of position (column 5, lines 42-44), it would be obvious to use the pump of Guagianio *et al.* to impel the coolant in the computer of Nakagawa *et al.* The number of

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pumps and connections (series or parallel) therebetween would be a matter of optimization to the artisan, who would be familiar with fluid mechanics.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa *et al.* in view of Guagiano *et al.* as applied to claim 5 above, and further in view of Larson *et al.* (US 5,720,338).

This claim differs from the above combination by reciting that the coolant tank includes a closed air bag. Larson *et al.* disclose a cooling system including a closed bag of coolant (22), which also contains air (column 7, lines 34-38). Because of the additional cooling provided by this bag, it would be obvious to use the bag of Larson *et al.* with the coolant tank of Nakagawa *et al.*, in the system previously modified to include the pump of Guagiano *et al.*

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa *et al.* in view of Guagiano *et al.* as applied to claim 5 above, and further in view of Hockaday (US 6,326,097).

This claim differs from the above combination by reciting that the coolant tank is connected to a fuel cell. Hockaday discloses a fuel cell (66) used to power a personal computer (67), and to charge the battery therein (column 11, lines 61-62). The fuel cell generates heat (column 12, lines 1-2), and would thus need to be cooled. For these reasons, it would be obvious to use the fuel cell of Hockaday in the computer of Nakagawa *et al.*, to charge the battery thereof. Since the fuel cell generates heat, it would be connected, at least thermally, to the coolant tank of Nakagawa *et al.*

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Claims 15, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa *et al.* in view of Guagiano *et al.* as applied to claim 1 above, and further in view of Agata *et al.* (US 6,474,823).

These claims differ from the above combination by reciting a speaker, a jog dial and a pointing device among the components of the electronic apparatus. Agata *et al.* disclose a computer (1) including speakers (6A, 6B), a jog dial (22) and a pointing device (5). To obtain the functions provided by these respective parts, it would be obvious to also use them in the computer of Nakagawa *et al.*

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa *et al.* in view of Guagiano *et al.* as applied to claim 1 above, and further in view of Ohashi *et al.* (US 6,611,425).

This claim differs from the above combination by reciting that the electronic device includes a fan. Ohashi *et al.* disclose a cooling fan used to cool a personal computer (column 3, lines 40-41). To obtain the additional cooling provided by such a fan, it would be obvious to include a cooling fan as disclosed by Ohashi *et al.* in the computer of Nakagawa *et al.*

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa *et al.* in view of Guagiano *et al.* as applied to claim 1 above, and further in view of Philips *et al.* (US 5,587,880).

This claim differs from the above combination by reciting that the coolant is a liquid fuel for a fuel cell. This does not actually require a fuel cell to be present, only that the coolant is a

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material that also be used as fuel for a fuel cell. Philips *et al.* disclose ethanol and methanol as coolant liquids (column 13, lines 29-33), both of these also being fuels for fuel cells. Since these liquids have lower freezing points than water, and different heat capacities, it would be obvious to use the coolants of Philips *et al.* in the computer of Nakagawa *et al.*

Claim 17 is objected to because of the following informalities: The word “keybord” is misspelled. Appropriate correction is required.

The disclosure is objected to because of the following informalities: The numeral 326, in figure 9, is not found in the specification. The numeral 362 is used on page 7 and in figure 2 to indicate a tube, but on page 14 and in figures 10 through 12 to indicate a set of battery cushioning members. Appropriate correction is required.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Robinson (US 3,536,423) and Berner (US 3,780,760) disclose pumps comprising a flexible container between two check valves.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen J. Kalafut whose telephone number is 571-272-1286. The examiner can normally be reached on Mon-Fri 8:00 am-4:30 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

sjk

A handwritten signature in black ink, appearing to be 'SJK' followed by a stylized flourish.

STANDARD  
PRIMARY EXAMINEE  
GROUP 1700